

- 25 -

CLAIMS

1. A method for detecting an inhibitor of interaction between two or more binding partners said method comprising contacting the binding partners before, during or after said partners have formed a binding partnership with a sample putatively containing said inhibitor and screening for either dissociation of binding between said binding partners or inhibition of binding between said binding partners wherein dissociation or inhibition of binding is indicative of the presence of an inhibitor.
2. A method according to Claim 1 wherein the inhibitor is a toxicant.
3. A method according to Claim 2 wherein the toxicant is a heavy metal, heavy metal ion, organic compound or organo-halide.
4. A method according to Claim 1 wherein a binding partner is a protein and/or a nucleic acid molecule.
5. A method according to Claim 1 wherein the binding partner is an enzyme.
6. A method according to Claim 1 wherein the binding partner is a substrate of an enzyme.
7. A method according to Claim 1 wherein a binding partner comprises a sulphydryl group.
8. A method according to Claim 4 wherein the binding partners are actin and actin-binding proteins.
9. A method according to Claim 8 wherein the actin-binding protein is DNaseI or cofilin.

- 26 -

10. A method according to any one of Claims 1 to 9 wherein at least one of the binding partners is immobilized to a solid support.
11. A method according to Claim 10 wherein the solid support is polystyrene or polymethacrylate.
12. A method according to Claim 8 or 9 wherein the actin or actin-binding protein is labelled with a dye.
13. An assay device for detecting an inhibitor of interaction between members of a binding partnership comprising two or more binding partners said assay comprising a solid support comprising a binding partner immobilized thereto and a binding partner labelled with a reporter molecule to said immobilized binding partner.
14. An assay device for detecting an inhibitor of interaction between members of a binding partnership comprising two or more binding partners said assay comprising a solid support comprising a binding partner immobilized thereto and a container adapted to contain a binding partner of said immobilized binding partner which is labelled or capable of being labelled with a reporter molecule.
15. A method according to Claim 13 or 14 wherein the inhibitor is a toxicant.
16. A method according to Claim 15 wherein the toxicant is a metal, metal ion, organic compound, organo-halide or a complex containing two or more of the foregoing.
17. A method according to Claim 13 or 14 wherein a binding partner is a protein and/or a nucleic acid molecule.
18. A method according to Claim 13 or 14 wherein the binding partner is an enzyme.

19. A method according to Claim 13 or 14 wherein the binding partner is a substrate of an enzyme.
20. A method according to Claim 13 or 14 wherein a binding partner comprises a sulphydryl group.
21. A method according to Claim 17 wherein the binding partners are actin and actin-binding proteins.
22. A method according to Claim 21 wherein the actin-binding protein is DNaseI or cofilin.
23. A method according to any one of Claims 13 to 22 wherein at least one of the binding partners is immobilized to a solid support.
24. A method according to Claim 23 wherein the solid support is polystyrene or polymethacrylate.
25. A method according to Claim 21 or 22 wherein the actin or actin-binding protein is labeled with a dye.
26. Use of binding partners of a binding partnership in the manufacture of an assay for the detection of an inhibitor of interaction between said binding partners.